

### **Remarks/Arguments**

Claims 1-4 were rejected under 35 U.S.C § 103 as being unpatentable over Nomi (US 4,368,766) in view of Nowakowski (US 3,949,742).

Applicants respectfully submit that the examiner did not establish a *prima facie* case of obviousness under MPEP § 2142-2143 because no motivation is offered to combine the two references. The Examiner stated that the motivation to substitute the non-porous back layer of Nowakowski's artificial skin for Nomi's porous film stems from Nowakowski's teachings that his back layer provides impermeability to bacteria, unlike the back layer of an artificial skin described in a patent cited by Nowakowski which utilizes a microporous back layer. Applicants respectfully submit that the teachings of Nowakowski do not provide such a motivation, for the reasons explained below.

Nowakowski never states that his non-porous back layer is superior to a microporous back layer with respect to resistance to bacteria penetration. He does state (col 2, line 9-14) that his back layer is superior to a microporous back layer such as the one described by Wheeler in US 3,648,692 with respect to elasticity. Elasticity is certainly desirable for an artificial skin that needs to stretch and conform, but is irrelevant and possibly undesirable for a portable water container, thus it does not provide a motivation to combine the Nomi and Nowakowski references.

The artificial skin described by Wheeler in US 3,648.692, cited by Nowakowski, has essentially the same construction as Nowakowski's artificial skin, that is, they both consist of a laminate of a foam front layer and a film back layer. The difference is that Wheeler's back layer is microporous, whereas Nowakowski's back layer is non-porous. In his Advisory Action, the examiner stated that, while Nowakowski describes his back layer as impermeable to bacteria, Wheeler describes his back layer as being not truly impermeable to bacteria but only hampering bacteria ingress,

and that such difference in bacteria resistance would lead the person skilled in the art of water containers to replace Nomi's microporous film with Nowakowski's back layer film. Applicants respectfully submit that the Examiner is incorrect. Wheeler repeatedly states in US 3,648,692 that the microporous back layer of his laminate is truly impermeable to bacteria. This is stated in the Abstract, on col 2 lines 43-44, on col 3 line 70, on col 4 line 28, and on col 6 lines 54-55 (claim 1). Bacteria cannot travel across the tortuous path of a microporous layer. As first reported by Louis Pasteur, bacteria only travel in straight lines.

Nowakowski does mention a benefit of ether-based polyurethanes back layers regarding resistance to bacteria invasion, but only relative to ester-based polyurethanes (col 3, line 31-44). This is because the ester-based polyurethane is susceptible to hydrolysis and may lose its integrity due to hydrolytic degradation (col 3, line 31-44).

Again, Nowakowski never states that his artificial skin with a non-porous back layer has an advantage over artificial skins with microporous back layers with respect to bacteria impermeability, and the Wheeler reference cited by Nowakowski confirms that such advantage does not exist. Furthermore, Nowakowski does not suggest that a cooling effect might be produced as a result of water transport through his back layer film. He does not recognize other potential advantages of a non-porous film relative to a microporous film such as the fact that the pores of a microporous film may become blocked during use leading to a change in permeability. Thus, there is no suggestion in the Nowakowski reference that might lead the person skilled in the art of water containers to substitute Nowakowski's back layer film for Nomi's microporous film.

Another reason why the person skilled in the art would not be motivated to replace Nomi's microporous PTFE with Nowakowski's back layer film is that they transmit water by a totally different mechanism. Contrary to what the Examiner states (p 5,

line 13-14 of Final Rejection dated 1/3/07), Nomi's microporous PTFE does not have the ability to transmit water by a solution/diffusion mechanism. The cooling effect produced by water transport through a microporous membrane of the type described by Nomi and the possibility to fabricate self-cooling containers from such materials have been previously recognized, not so for solution/diffusion membranes.

Another reason why applicants feel that a *prima facie* case for obviousness has not been presented is that the Nomi and Nowakowski references are directed to entirely different arts and in Applicants' opinion are not properly combinable. The Nomi reference is directed to a self-cooling water bag and is therefore pertinent to Applicants' invention, but the Nowakowski reference is directed to a synthetic skin for the therapy of burns, donor sites for skin grafting, ulcers and the like. The person skilled in the art of water containers would not be inclined to look at such a remote area of technology. A closer connection between the two arts could be found if Nomi's polytetrafluoroethylene had the ability to transport water by the same solution/diffusion mechanism as the back layer of Nowakowski, as stated by the examiner (p 5, line 13-14 of Final Rejection dated 1/3/07), but the examiner is incorrect on this point. Nomi's polytetrafluoroethylene is highly hydrophobic and could not possibly transport water by a solution/diffusion mechanism.

Thus, there is no suggestion in Nowakowski that might lead the person skilled in the art to combine the Nowakowski and the Nomi references in the manner suggested by the examiner. The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. See MPEP 2143.01 (III). The desirability of the combination is not suggested. Such suggestion can only be derived from the hindsight knowledge of Applicants' own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 USC §103 is impermissible. See *W L Gore and Assocs, Inc, v Garlock, Inc*, 721 F.2d 1553, 220 USPQ at 312-313.

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Applicants therefore respectfully submit that a *prima facie* case for obviousness has not been presented. Withdrawal of the obviousness rejections of claims 1-4 is therefore respectfully requested.

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### **Closing**

The claims of the present application are believed by Applicants to be in condition for allowance and the Examiner's favorable consideration is respectfully requested. If the Examiner has any question that might easily be resolved by phone, he is invited to contact the Applicants at (847) 948-0392.

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Respectfully submitted,

/Serena Giori/

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